

REMARKS

Claims 29 and 37-39 are pending in the application. Claims 30-36 have been canceled without prejudice. New claims 37-39 have been inserted. No new matter has been introduced, and entry of the above revised claims is respectfully requested.

Priority Document

The contents of the priority document (Korean Patent Application No. 10-2004-004308) filed with the Korean Intellectual Property Office on January 20, 2004 and the present application filed with the USPTO on July 19, 2006 are identical. Thus, Applicants submit herewith a "VERIFIED STATEMENT ON TRANSLATION". A certified copy of the Korean priority document will be submitted in due course.

Drawing

The Office indicated that color drawings are required for Figs. 3A-3F. The replacement color photomicrographs, which are Figures 3A-3F, have been mailed to the Patent Office via first class air mail. Entry of the replacement drawings is respectfully requested. Applicant believes that this rejection has been overcome.

Specification

The Examiner has noted several formal errors in the specification. The present amendments to the specification overcome this rejection.

Rejection Under 35 U.S.C. §112, first paragraph

Claims 29-31, 35 and 36 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested.

The Examiner has essentially noted the following:

(1) The actual sequence for the ferritin H gene is required to be inserted into the application, i. e., the gene sequence of GenBank accession number BC012314 must be inserted into the application.

Applicant submits the following response. Ferritin H chain (BC12314) is described in the specification as originally filed. An ordinary person in the art can easily search Protein Sequence and nucleotide sequence from BC12314 by using NCBI website. However, Applicant provides a new Sequence Listing accompanying this Amendment, in which the amino acid sequence of Ferritin H chain (BC12314) is indicated as SEQ ID NO:49 and the nucleotide sequence as SEQ ID NO:50. Applicant believes that even though the sequence itself is presented for the first time, the inclusion of the instant Ferritin H chain sequence should not be considered to be new matter because the sequence was available to the public and the specification as originally filed application stated where the sequence information could have been found. Entry of the Sequence Listing is respectfully requested.

(2) The Examiner indicated that the art of using ferritin H at the time of the invention was “underdeveloped”. Therefore, the Examiner concluded that there is a high degree of unpredictability associated with using ferritin H. In particular, the Examiner cites various references that are alleged to support this unpredictability. Delivery of ferritin H is also criticized as being unpredictable. The Examiner also indicated that the specification does not provide any working examples of using ferritin H.

In response, Applicant provides the following remarks. The Examiner’s attention is directed to the accompanying Rule 132 Declaration by Dr. Inpyo Choi, which show data using ferritin H chain. As can be seen from Exhibit B in the Declaration, the Declarant found the effects of Ferritin H on NK cells. The supplementary figures in Exhibit B show that when HSC was treated with IL-15 and Ferritin H together, the percentage of NK cells was increased more than when they were treated with IL-15 alone (NK1.1+ cell; 14% treated with IL-15 only versus 23% treated with IL-15 and 1 ug/ml of Ferritin H together, and NK1.1+ NKG2A/C/E+ cell; 39% treated with IL-15 only versus 43% treated with IL-15 and 1 ug/ml of Ferritin H together). The above results indicate that Ferritin H plays an important role in the differentiation from pNK cells into mNK cells and the search for genes regulating NK cell differentiation was correctly carried out according to the presently claimed invention. In summary, the Declarant indicates

that differentiation of pNK is promoted by treating with IL-15 and ferritin H chain rather than by treating with IL-15 alone. This data provides ample support for the claimed invention directed to using ferritin H chain to promote differentiation of pNK. Accordingly, withdrawal of this rejection is respectfully requested.

Sequence Listing Statement

Enclosed herewith in full compliance with 37 C.F.R. §§ 1.821-1.825 is a Sequence Listing to be inserted into the specification. The Sequence Listing in no way introduces new matter into the specification.

Also submitted herewith in full compliance with 37 C.F.R. §§ 1.821-1.825 is a computer readable form (CRF) copy of the Sequence Listing. Applicant's undersigned representative hereby states that the information recorded in the CRF is identical to the written sequence listing.

Conclusion

It is believed that the application is now in condition for allowance. Applicants request the Examiner to issue a notice of Allowance in due course. The Examiner is encouraged to contact the undersigned to further the prosecution of the present invention.

The Commissioner is hereby authorized to charge JHK Law's Deposit Account No. **502486** for such fees required under 37 CFR §§ 1.16 and 1.17 and to credit any overpayment to said Deposit Account No. **502486**.

Respectfully submitted,

JHK Law

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